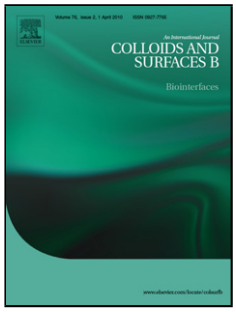
Accepted Manuscript



Title: Antimicrobial Films Based on Cellulose-Derived Hydrocolloids. A Synergetic Effect of Host-Guest Interactions on Quality and Functionality

Author: Roi Rutenberg Solange Bernstein Nachman Paster Eli Fallik Elena Poverenov

PII: S0927-7765(15)00395-1
DOI: http://dx.doi.org/doi:10.1016/j.colsurfb.2015.06.022
Reference: COLSUB 7152

To appear in: *Colloids and Surfaces B: Biointerfaces*

Received date: 1-4-2015
Revised date: 8-6-2015
Accepted date: 10-6-2015

Please cite this article as: R. Rutenberg, S. Bernstein, N. Paster, E. Fallik, E. Poverenov, Antimicrobial Films Based on Cellulose-Derived Hydrocolloids. A Synergetic Effect of Host-Guest Interactions on Quality and Functionality, *Colloids and Surfaces B: Biointerfaces* (2015), http://dx.doi.org/10.1016/j.colsurfb.2015.06.022

Highlights

A series of antimicrobial films based on biodegradable cellulose-derived hydrocolloids was prepared

β-cyclodextrin was used to successfully enhance Propionic acid's content in films

β-cyclodextrin was found to prolong Propionic acid's release rate

The films' physical, mechanical, morphological and antimicrobial properties were evaluated

β-CD and PA in hydrocolloids matrix demonstrated a synergetic effect resulting in qualitative and effective bio-active films